

IN THE CLAIMS:

Claim 1 (currently amended): An ocular lens material comprising a copolymer prepared by polymerization ~~with heating of a monomer mixture and/or with irradiating a monomer mixture with ultraviolet ray by means of a molding method, said monomer mixture containing, as main components,~~

(A) a polysiloxane macromonomer in which a polymerizable group bonds to a siloxane main chain through at least one urethane bond, and which is represented by the formula (I):

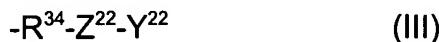


wherein  $A^1$  is a group represented by the formula (II):



in which  $Y^{21}$  is acryloyl group, vinyl group or allyl group,  $Z^{21}$  is oxygen atom or direct bond, and  $R^{31}$  is direct bond or a linear, branched or aromatic alkylene group having 1 to 12 carbon atoms;

$A^2$  is a group represented by the formula (III):



in which  $Y^{22}$  is acryloyl group, vinyl group or allyl group,  $Z^{22}$  is oxygen atom or direct bond, and  $R^{34}$  is direct bond or a linear, branched or aromatic alkylene group having 1 to 12

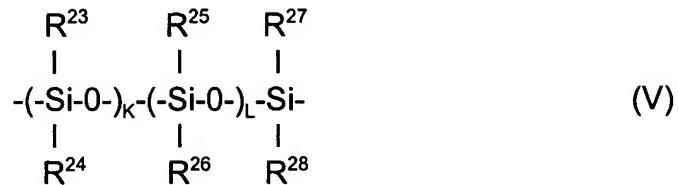
carbon atoms, where  $Y^{21}$  in the formula (II) and  $Y^{22}$  in the formula (III) may be the same or different;

$U^1$  is a group represented by the formula (IV):

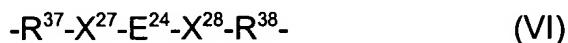


in which each of  $X^{21}$  and  $X^{25}$  is independently selected from direct bond, oxygen atom and an alkylene glycol group having 1 to 6 carbon atoms,  $E^{21}$  is -NHCO- group (in this case,  $X^{21}$  is direct bond,  $X^{25}$  is oxygen atom or an alkylene glycol group and  $E^{21}$  and  $X^{25}$  form urethane bond), -CONH- group (in this case,  $X^{21}$  is oxygen atom or an alkylene glycol group,  $X^{25}$  is direct bond and  $E^{21}$  and  $X^{21}$  form urethane bond) or a divalent group derived from a diisocyanate selected from a group of a saturated or unsaturated aliphatic diisocyanate, an alicyclic diisocyanate and or an aromatic diisocyanate (in this case, each of  $X^{21}$  and  $X^{25}$  is independently selected from oxygen atom and an alkylene glycol group and  $E^{21}$  and  $X^{21}$ ,  $E^{21}$  and  $X^{25}$  form two urethane bonds, respectively) and  $R^{32}$  is a linear or branched alkylene group having 1 to 6 carbon atoms;

each of  $S^1$  and  $S^2$  is independently a group represented by the formula (V):



in which each of  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$ ,  $R^{27}$  and  $R^{28}$  is independently an alkyl group having 1 to 6 carbon atoms, an alkyl group having 1 to 6 carbon atoms substituted with fluorine atom or a phenyl group,  $K$  is an integer of 1 to 1,500,  $L$  is 0 or an integer of 1 to 1,499, and  $K + L$  is an integer of 1 to 1,500;  $U^2$  is a group represented by the formula (VI):



in which each of  $R^{37}$  and  $R^{38}$  is independently a linear or branched alkylene group having 1 to 6 carbon atoms, each of  $X^{27}$  and  $X^{28}$  is independently oxygen atom or an alkylene glycol group having 1 to 6 atoms, and  $E^{24}$  is a divalent group derived from a diisocyanate selected from a group of a saturated or unsaturated aliphatic diisocyanate, an alicyclic diisocyanate and or an aromatic diisocyanate (in this case,  $E^{24}$  and  $X^{27}$ ,  $E^{24}$  and  $X^{28}$  form two urethane bonds, respectively);

$U^3$  is a group represented by the formula (VII):



in which  $R^{33}$  is a linear or branched alkylene group having 1 to 6 carbon atoms, each of  $X^{22}$  and  $X^{26}$  is independently selected from direct bond, oxygen atom and an alkylene glycol group having 1 to 6 carbon atoms,  $E^{22}$  is  $-NHCO-$  group (in this case,  $X^{22}$  is oxygen atom or an alkylene glycol group,  $X^{26}$  is direct bond and  $E^{22}$  and  $X^{22}$  form urethane bond),  $-CONH-$  group (in this case,  $X^{22}$  is direct bond,  $X^{26}$  is oxygen atom or an alkylene glycol group and  $E^{22}$  and  $X^{26}$  form urethane bond) or a divalent group derived from a diisocyanate

selected from a group of a saturated or unsaturated aliphatic diisocyanate, an alicyclic diisocyanate and or an aromatic diisocyanate (in this case, each of  $X^{22}$  and  $X^{26}$  is independently oxygen atom or an alkylene glycol group having 1 to 6 carbon atoms and  $E^{22}$  and  $X^{22}$ ,  $E^{22}$ , and  $X^{26}$  form two urethane bonds, respectively); and

$n$  is 0 or an integer of 1 to 10,

(B) a silicon-containing alkyl methacrylate,

(C) a hydrophilic monomer comprising

(C-1) N-vinylpyrrolidone and

(C-2) a hydrophilic monomer excepting N-vinylpyrrolidone (C-1), containing acryloyl group, vinyl group or allyl group;

(D) at least one monomer selected from an alkyl (meth)acrylate and a fluorine-containing alkyl (meth)acrylate; and

(E) a crosslinkable monomer comprising

(E-1) a crosslinkable monomer containing methacryloyl group, and at least one group selected from acryloyl group, vinyl group and or allyl group, ~~and another group of methacryloyl group, and~~

(E-2) a crosslinkable monomer containing at least two methacryloyl groups, wherein the weight ratio of the total of the polysiloxane macromonomer (A) and the silicon-containing alkyl methacrylate (B) to the hydrophilic monomer (C), the total weight of (A) and (B)/the weight of (C), is 30/70 to 70/30,

the weight ratio of the polysiloxane macromonomer (A) to the silicon-containing alkyl

methacrylate (B), the weight of (A)/the weight of (B), is 25/75 to 75/25, the weight ratio of N-vinylpyrrolidone (C-1) to the hydrophilic monomer (C-2), the weight of (C-1)/the weight of (C-2), is 50/50 to 100/0, and the amount of the monomer (D) in the monomer mixture is 0 to 20 % by weight,

wherein the copolymer is prepared by polymerization with irradiating the monomer mixture with ultraviolet ray having a wavelength of 365 nm in illuminance of 0.5 to 20 mW/cm<sup>2</sup> for 1 to 80 minutes, and in the monomer mixture, the weight ratio of the total of the polysiloxane macromonomer (A) and the silicon-containing alkyl methacrylate (B) to the hydrophilic monomer (C), the total weight of (A) and (B)/the weight of (C), being 40/60 to 70/30.

the weight ratio of the polysiloxane macromonomer (A) to the silicon-containing alkyl methacrylate (B), the weight of (A)/the weight of (B), being 35/65 to 75/25,

the weight ratio of N-vinylpyrrolidone (C-1) to the hydrophilic monomer (C-2), the weight of (C-1)/the weight of (C-2), being 50/50 to 100/0, and the amount of the monomer (D) in the monomer mixture being 0 to 20 % by weight.

Claim 2 (original): The ocular lens material of Claim 1, wherein at least one face or a part of at least one face of the copolymer is cut.

Claim 3 (original): The ocular lens material of Claim 1, wherein the copolymer is prepared by polymerization with heating of the monomer mixture at 50° to 150°C for 10 to

120 minutes, and

in the monomer mixture, the weight ratio of the total of the polysiloxane macromonomer (A) and the silicon-containing alkyl methacrylate (B) to the hydrophilic monomer (C), the total weight of (A) and (B)/the weight of (C), being 30/70 to 70/30,

the weight ratio of the polysiloxane macromonomer (A) to the silicon-containing alkyl methacrylate (B), the weight of (A)/the weight of (B), being 25/75 to 75/25,

the weight ratio of N-vinylpyrrolidone (C-1) to the hydrophilic monomer (C-2), the weight of (C-1)/the weight of (C-2), being 50/50 to 100/0, and the amount of the monomer (D) in the monomer mixture being 0 to 20 % by weight.

Claim 4 (canceled):

Claim 5 (original): The ocular lens material of Claim 1, wherein the amount of the crosslinkable monomer (E) is at least 1 part by weight based on 100 parts by weight in total of the polysiloxane macromonomer (A), the silicon-containing alkyl methacrylate (B), the hydrophilic monomer (C) and the monomer (D), and

[[ $\alpha$  which is]] the total number of moles of acryloyl group, vinyl group and allyl group in the hydrophilic monomer (C) and the monomer (D) which is represented by  $\alpha$  below;

[[ $\beta$  which is]] the total number of moles of methacryloyl group in the silicon-containing alkyl methacrylate (B) and the monomer (D) which is represented by  $\beta$  below;

[[ $\gamma$  which is]] the total number of moles of acryloyl group, vinyl group and allyl group

in the polysiloxane macromonomer (A) and the crosslinkable monomer (E) which is represented by  $\gamma$  below; and

[[ $\delta$  which is]] the total number of moles of methacrylol group in the crosslinkable monomer (E) which is represented by  $\delta$  satisfy both conditions of  $\alpha/\gamma = 20$  to 80 and  $\beta/\delta = 15$  to 30.

Claim 6 (original): The ocular lens material of Claim 5, wherein the ratio of  $\alpha/\gamma$  to  $\beta/\delta, (\alpha/\gamma)/(\beta/\delta)$ , is 1 to 3.

Claim 7 (original): The ocular lens material of Claim 1, wherein the crosslinkable monomer (E-1) is allyl methacrylate and the crosslinkable monomer (E-2) is ethylene glycol dimethacrylate.

Claim 8 (original): The ocular lens material of Claim 1, wherein the hydrophilic monomer (C-2) is at least one selected from acrylamide, N,N-dimethylacrylamide, N,N-diethylacrylamide, N-isopropylacrylamide, acryloylmorpholine, 2-hydroxyethyl acrylate, 2-dimethylaminoethyl acrylate and vinyl acetate.

Claim 9 (original): The ocular lens material of Claim 1, wherein the hydrophilic monomer (C-2) is N,N-dimethylacrylamide.